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LOOK TO TREE BARK FOR NEW WINTER INTEREST

A distinctive and extremely ornamental characteristic of many trees which often escapes notice until the winter months, is the wide diversity in color, form and texture of their bark. And while the interest is in almost every instance present throughout the year, it is the dormant season which brings it into prominence. For, only when divested of the distracting influence of foliage, flowers and fruit, is a tree's basic architecture most clearly revealed—its winter habit, its branch and twig structure, and the individual differences of its buds and bark.

Aesthetically our interest in bark is confined to its external form, the outer covering of lifeless cells which provides the tree with mechanical support and performs the still more important function of protecting the living cambium layer beneath. On young trees this superficial covering may be thin and smooth, but as the trunk increases in size, the stress and strain of expansion gives rise to the characteristic cracks, fissures and ridges upon which identification is based.

As texture and color are the two most significant points of distinction, they furnish a logical approach to any bark study. True, flavor and odor are sometimes important, as in the case of the Sassafras, the Cherry Birch and the Black Cherry, but basically it is a bark's color, and its smoothness or roughness, tightness or looseness and corkiness or shagginess which attract attention.

Outstanding among the smooth-barked trees are the Beeches, the American *(Fagus grandifolia)* with its clean, often mottled bark of a lovely steel-gray color and the European *(Fagus sylvatica)* with its darker toned, but equally smooth, tight-fitting coat. Both are extremely handsome. So too, is the bark of the American Hornbeam or Blue Beech *(Carpinus caroliniana)*, small tree of the forest understory whose multiple trunks are covered with thin, close-fitting, slate-gray bark, fluted with unique

rounded, longitudinal ridges. Its appearance has been aptly described as "muscular". Less familiar among native trees is the Yellowwood or Virgilia *(Cladrastis lutea)*, member of of the Pea Family, which like the Beech is furnished with thin, smooth, gray to light brown bark, marked with slight ridges and horizontal wrinkles. *Prunus serrula,* an exotic Cherry from Western China, also belongs in this category, even though its performance at the Arboretum has been disappointing. Satiny-smooth, glossy-red bark marked with horizontal lines of lenticels make it one of the showiest of all Prunus. The Juneberries *(Amelanchier* species), are also smooth-trunked, with ashy-gray bark divided by shallow fissures into lengthwise brownish ridges. The decorative bark and pleasing habit of growth make this a tree whose presence in the landscape is always appreciated. Smooth, light colored bark is characteristic of two other native trees, the Quaking and Big Toothed Aspens *(Populus tremuloides* and *P. grandidentata).* In both the bark color varies from gray or olive-green to almost pure white, with the smoothness persisting for some years. On older specimens of both the lower sections of the trunks are dark brown or almost black, however, and deeply furrowed into broad, flat ridges. The felty-leaved Silver Poplar *(Populus alba)*, is another member of the Willow Family *(Salicaceae)* known for its conspicuous bark. Smooth, greenish-white and firm on the branches and upper parts of the trunk, the bark acquires with age a dark spotting and a thickening into pronounced ridges of the lower trunks. During their early years, both Silver and Red Maples *(Acer saccharinum* and *Acer rubrum)* also have attractive, smooth, silvery-gray bark, which as on so many trees becomes darker and fissured with age. The Silver Maple develops thin, scaly flakes showing red where freshly loosened from the trunks; the Red Maple, rough, shaggy plates of dark gray.

Peeling-barked trees, as represented by the birches, figure more prominently in landscape planting, providing not only textural interest, but color as well. Both the Paper and European White Birches *(Betula papyrifera* and *B. pendula)* have handsome, chalky-white bark which peels horizontally into thin, easily separated layers. The European species is not inclined to peel as easily as the Paper Birch, however, and with age the bark at the base of the trunk often becomes slashed with deep, gusset-like furrows exposing dark inner surfaces. The moisture loving Red or River Birch *(Betula nigra)* adds a still different texture and color note with its papery fringe of orange brown. So does its shaggier appearing relative, the Yellow Birch *(Betula lutea)*, whose fringy, ribbon-like layers of silvery or yellowish-gray appear almost translucent. The bark beneath them is glossy tan. Similar in color to the Paper and European White Birch, though less inclined to peel, is the Gray or Old Field Birch *(Betula*

populifolia), lower growing inhabitant of poor soil and burned over areas. Dark triangular blotches below the junction of the branches and the main trunk serve as one of its identifying features. Exfoliating bark is characteristic of another interesting tree, the Paperbark Maple *(Acer griseum)* from western China. Because of its rarity in cultivation, few people are aware of the year-round attraction of its cinnamon-brown bark exfoliating in paper-thin strips. And as it is rather difficult to establish, it offers a challenge to anyone wishing to try the unusual.

Of our scaly-barked trees, the Common Wild Black Cherry *(Prunus serotina)* is perhaps best known. Young specimens have satiny-smooth bark of rich, reddish-brown, conspicuously marked with lenticels arranged in narrow transverse streaks. As the tree matures, however, the bark breaks into rough, scaly plates. Similar to it in many ways is the seldom planted Cherry or Black Birch *(Betula lenta)*, whose bark is smooth and lustrous on young specimens, dark reddish-brown, deeply furrowed and broken into thick, irregular plates on older trees. A distinguishing wintergreen fragrance and taste set it apart. A close look at the Kentucky Coffee Tree *(Gymnocladus dioica)* will reveal its thin, gray bark which also separates into prominent flat scales. The same is true of mature Honey Locusts *(Gleditsia triacanthos)* after the bark has lost the sleek smoothness of juvenility. Vicious appearing, but extremely decorative multipronged thorns of shiny brown impart unexpected interest to the live looking brown bark divided into flat, peeling longitudinal strips.

The distinction between the scaly and flaky-barked trees is so slight they scarcely demand separate listings. There is the Ironwood or Hop Hornbeam *(Ostrya virginiana)*, whose flaky, grayish-brown, reddish-tinged bark is broken into narrow, flattened shreds loose at the ends, the White Oak *(Quercus alba)*, with light gray bark broken into flat, oblong, shallowly-fissured scales which flake off readily, and of course, the Shagbark Hickory, *(Carya ovata)*, whose elongated loose, shaggy plates are a familiar sight to everyone.

No trees attract more attention in winter than those with mottled bark. Exemplified by the Sycamores and Planes, whose mottling is an unmistakable identifying characteristic, they are an easily spotted and much admired group. Our fast growing native Sycamore *(Platanus occidentalis)*, has inflexible bark which peels off in large, thin flakes exposing conspicuous areas of greenish, yellowish and white inner bark. The upper branches are frequently pure white. The London Plane *(Platanus acerifolia)*, has bark of more subdued olive-green coloring, the green outer covering peeling to reveal darker patches beneath. Similar mottling is found on the true Chinese Elm *(Ulmus parvifolia)*, whose dark, variable-

shaped plates slough off to reveal rounded, light gray areas beneath. Though of tempermental behavior in this area, the Japanese Zelkova *(Zelkova serrata)*, has bark which also eventually becomes mottled. While not as conspicuously so as the others, it nevertheless shows a pleasing combination of dark and reddish brown.

Checkered bark typifies still another group, of which such trees as the Persimmon *(Diospyros virginiana)*, Flowering Dogwood *(Cornus florida)*, Sour Gum *(Nyssa sylvatica)*, and White Ash *(Fraxinus americana)*, are representatives. Persimmon bark shows this characteristic most prominently, being dark brown or almost black in color and divided into thick, squarish blocks. Flowering Dogwood bark may be recognized by its rough, four-sided or rounded scales which have been likened to alligator skin, and Sour Gum by its very thick, deeply-fissured, reddish-brown bark broken into irregularly shaped plates. White Ash bark is light gray in color and readily distinguishable at any season by its deep, diamond-shaped furrows.

Each in a class by itself are such trees as the gray-trunked Hackberry *(Celtis occidentalis)*, whose deep, discontinuous fissures and rough excrescences mark it distinct from all other trees, the deeply fissured, corky barked Phellodendrons, of which *P. amurense,* the Amur Cork Tree, is best known, the Bitternut Hickory *(Carya cordiformis)*, whose closely netted bark is marked wth criss-cross ridges of rhythmic formation, and the highly decorative Striped Maple or Moosewood *(Acer pennsylvanicum)*, a small tree of deep mountain woods whose smooth, green and eventually brown bark is striped longitudinally with conspicuous white lines. This Maple being partial to a moist, acid soil, is not easily established in this area.

Inasmuch as deeply fissured or furrowed bark is typical of so many of our forest species, it is among trees of this category that the most confusion in identification is lkely to occur. Close examination will usually reveal pronounced individual differences, however. The Sugar Maple, *(Acer saccharum)*, for example, has much harder bark than most other members of the genus, dark gray in color and with furrows which curve back along the edges. Our venerable American Elm *(Ulmus americana)*, also has thick bark of ashy-gray, but divided by irregular fissures into broad, scaly ridges. In contrast, the bark of *Ulmus fulva,* the Slippery or Red Elm, famed for its mucilaginous inner bark, is dark brownish-gray with flat-topped, longitudinal ridges and regular, continuous fissures. A reddish-brown undercoat differentiates it from American Elm. The trunks of the Cottonwood *(Populus deltoides)*, Black Walnut *(Juglans nigra)*, Butternut *(Juglans cinerea),* Black Locust *(Robinia Pseudoacacia),* and Red and Bur Oaks *(Quercus borealis maxima* and *Q. macrocarpa)* like-

wise exhibit deep furrowing. In the Cottonwood the bark is dark gray or brown with deep fissures and wide ridges, in the Black Walnut, dark brown, furrowed into rounded, rather regularly connecting ridges, and in the Butternut, light-gray deeply divided into long, flat-topped, whitish ridges separated by smooth fissures. The dark, reddish-brown bark of Black Locust is very thick, hard and deeply furrowed and frequently twists diagonally across the trunk. This is quite unlike the Honey Locust's much flatter scales. As to the oaks, young Burs possess a never failing earmark, peculiar corky wings, while on older trees a dark, thick, coarsely-furrowed texture is typical. Mature Northern Red Oaks may be recognized by the column-like effect of their blackish-gray bark fissured in long clefts with broad, smooth areas between. Immature specimens are light gray and smooth surfaced. Furrowing of variable depth is also a characteristic of three other ornamentals, the stately Tulip Tree *(Liriodendron tulipifera)*, distinguished by its deep, symmetrical furrows, the Sassafras *(Sassafras albidum)*, whose aromatic, reddish-brown bark has twisted ridges, and the Linden or Basswood *(Tilia americana)*, whose dark gray bark is deeply furrowed into narrow, flat-topped ridges marked with characteristic horizontal cracks.

There are other trees, both deciduous and coniferous, which might well have supplemented this list, but it is hoped the subjects cited will arouse an awareness of the differences in the bark of the trees around us, and stimulate further interest in bark characteristics as a decorative feature.

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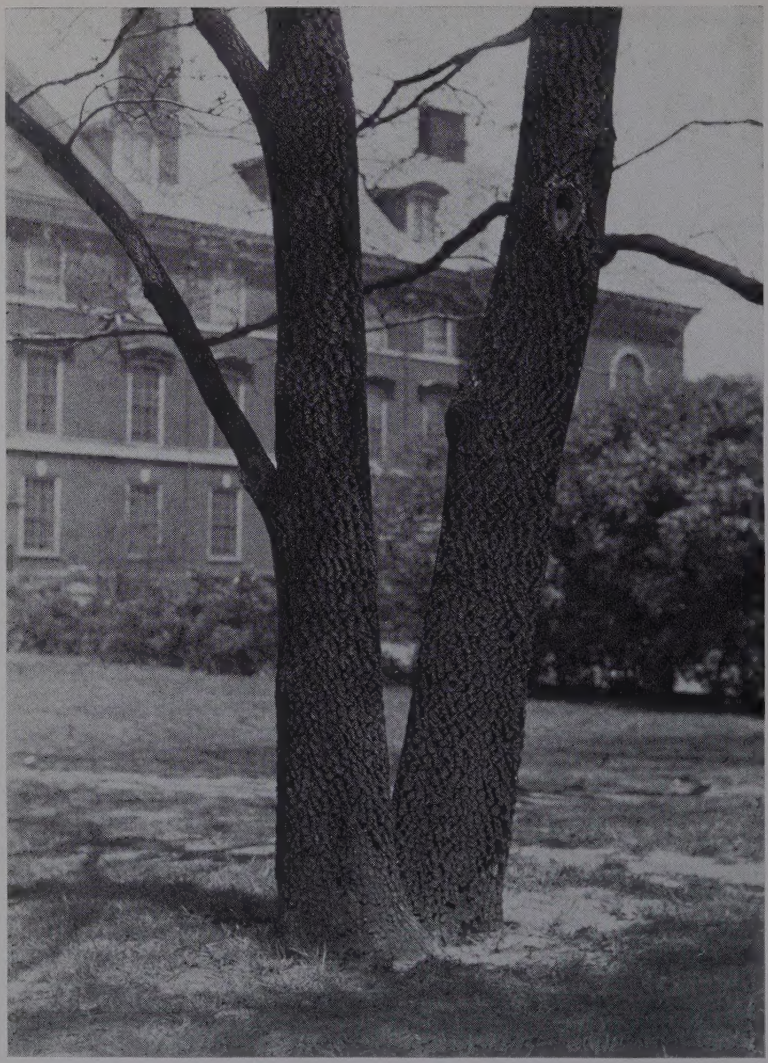

The Persimmon, *Diospyros virginiana* L, ornamental tree whose distinctive, checkered bark is conspicuous at any season.